RESEARCH PROBLEM STATEMENT #DC-601

I – Problem Title
Accidents Involving Driver Fatigue

II – Research Problem Statement
To support planning for improved highway safety, this study will gather and analyze California state highway accident data pertaining to accidents in which fatigue was cited as a primary or contributing factor.

The study will gather data and analyze how these factors compare with other primary or contributing factors and to total accident rates in California.

Specifically, this study will quantify and analyze these types of accidents within specified route segments, address the traffic characteristics of those route segments, provide perspective on the nature of these accidents, and point to potential actions that should be considered to reduce these kinds of accidents.

III – Objective
The primary objective of this study is to gain information that will facilitate better planning to improve safety for California highway users.

IV – Background
Nationally, fatigue is cited as a significant factor in highway accidents— possibly second only to driving under the influence. The US Air Force Research Laboratory estimates that drowsiness causes 100,000 accidents, 1,500 fatalities, 71,000 injuries and $12.5 billion in cost each year in the United States. They also estimate that 31% of all trucker fatalities are fatigue related.

V – Estimate of Duration of Research
One year duration.

VI - Statement of Urgency, Benefits, and Expected Return on Investment
This study is urgently needed. Potential hazards and liability may exist if the Department fails to address these issues that have become prominent on the national level in the past several years.

Potential benefits to be gained include better understanding and ability to reduce accidents, injuries, fatalities and property damage that may currently occur due to drowsy driving and unsafe roadside parking by commercial truckers There is high potential for improvement of highway safety and mobility of goods movement. The cost of the study is minimal and it represents a small fraction of the cost of accidents and tort liability each year in California.

VII – Related Research
NCHRP Synthesis 287, "Sleep Deprivation Countermeasures for Motorist Safety," (2000), (p. 54) provides a good list of references on drowsy driving. Transportation Planning is also working on a Goods Movement Action Plan.

Research on unsafe roadside parking is not known, but the California Division of Highways "Guidelines for CURE Projects" (1967) and the historical versions of the "Highway Design Manual" may provide insight into the clear recovery zone concept.

VIII - Deployment Potential
There is probable potential for this research to lead to additional in-depth examination of these issues on a regional basis. The probable deployable product is a change in policies, manuals or capital project priorities.

Internal stakeholders include the Divisions of Design, Maintenance, Traffic Operations and Legal. External stakeholders may include the California Highway Patrol, the California Trucking Association, and NATSO (formerly known as National Association of Truck Stop Operators).